# STATE OF QUALITY REPORT: PHASE I

## EXECUTIVE SUMMARY

### 1.0 OVERVIEW

The TennCare "Centers of Excellence" program is an outcomes-based, data-driven quality improvement initiative designed to improve pharmaceutical utilization and overall healthcare costs within the TennCare program. Designed, developed and implemented by Applied Health Outcomes in collaboration with TennCare, the program is designed to accomplish the following goals:

- Identify ways to better serve the health care needs of TennCare members
- Improve pharmaceutical resource utilization and medical care for important disease states; and
- Improve patient outcomes by providing physicians and other providers with data to support evidence-based prescribing guidelines

Through medical / behavioral health and pharmacy claims data analysis, ten priority disease states will be identified based on utilization levels, cost and opportunities for quality improvement. From this data, the final decision as to which specific disease states will be selected for implementation within the Centers of Excellence Program will rest with the Board of Directors. The Board will be comprised of fifteen Tennessee-based thought leaders including ten Tennessee physicians. Representation will include office-based, academic, primary care and specialty practitioners along with five respected interdisciplinary health professionals and researchers practicing in the state. The Centers of Excellence Program is being supported through grants from the pharmaceutical industry and research foundations; thus, no funding is required from the State of Tennessee. Once the Board of Directors selects a disease area, a separate Centers of Excellence Steering Committee will be appointed. These committees will be comprised of Tennessee-based physician specialists and interdisciplinary health professionals with expertise in the target disease. Their role is to evaluate and select quality improvement intervention strategies for the center from disease state management vendors, partner programs and other appropriate organizations. On-going data assessments will ensure feedback for continuous quality improvement.

## 2.0 INTRODUCTION

National healthcare expenditures in the United States are $1.2 trillion per year, accounting for 14% of the gross domestic product (GDP). Spending for prescription drugs represented 8.2% of total health care costs in 1999 (HCFA, Office of the Actuary). Spending for prescription drugs has skyrocketed in recent years. In 1960 the nation spent around $70 per person on prescription drugs rising to $189 by 1980 and $335 by 1998. In the TennCare program, for example, the prescription costs for the pharmacy carve out (behavioral health - BHO and dual eligible – Medicare/Medicaid populations) has increased to over $60 million per month. Despite the climbing costs and increasing utilization of pharmaceuticals, recent evidence supports the theory that appropriate drug use can reduce overall health care costs in the form of shorter hospital stays and improved overall health. According to a study in the September/October issue of Health Affairs, pharmaceuticals are the "cheapest weapon" against increasing medical costs. The study found that pharmacy expenses can "offset" other medical costs, and while researchers did not find "sufficient data" to prove the theory conclusively, study author, J.D. Kleinke suggests looking to the "broader changes in…medical spending" to reveal the value of pharmaceutical advances. For example, while pharmaceutical spending rose from 5.5% to 8.5% of total medical spending during the 1990s, hospital expenditures dropped from 37# to 33% during the same time period.[1]

Although managing costs is important, expenditure controls should not comprise quality. Therefore, healthcare entities need to determine where cost management can be achieved through improving the level of quality and clinical outcomes. The quality paradigm thus permits opportunities to demonstrate decreases in mortality, morbidity and spending on other medical services such as inpatient stays and emergency room visits through the appropriate use of pharmaceuticals.

## 3.0 STATE OF QUALITY REPORT

The purpose of the State of Quality report is to highlight those disease states that have the highest potential for quality improvement and resultant system-wide cost savings. Phase I of the analysis contained in this report describes diseases that have significant TennCare, MCO and BHO resource utilization as well as conditions that have shown great potential for improvement based upon results achieved in other national quality

improvement studies and intervention programs. A combination of medical / behavioral health and pharmacy costs* and utilization derived from claims submitted to TennCare were used to evaluate the various disease states. Phase II (to be presented in a subsequent report) will encompass the use of nationally recognized quality metrics and literature-based benchmarks, when available, to evaluate the performance of the TennCare program in managing the specific disease states. Additionally, these measures will be used by the Board of Directors to decide which disease states are appropriate for the formation of a Center of Excellence.

Although the findings from this report are specific to the TennCare population, they most likely reflect the general state of healthcare practice across the nation and are therefore not unique to the TennCare Program. The Institute of Medicine's recent publication "Crossing the Quality Chasm" states that "quality problems are everywhere, affecting many patients. Between the health care we have and the care we could have lies not just a gap, but a chasm".[2] The report outlines processes and mechanisms to redesign health care delivery and improve quality across all health care sectors. A specific recommendation suggests that health systems, provider's etc. identify priority health conditions within a population and apply disease specific evidence based guidelines to optimize the care provided to patients. This recommendation reflects the premise for The Centers of Excellence and it also provides evidence that TennCare leaders are on the forefront of a national effort to improve the quality of healthcare.

## 4.0 METHODOLOGY

Analysis for the state of quality report was conducted in two phases. The objectives of the first phase were to:

- Aggregate cost and utilization into meaningful clinical and therapeutic categories
- Categorize resource utilization by clinical and therapeutic categories
- Identify and describe resource consumption across disease states
- Identify disease states with opportunities for quality improvement
- Select ten disease states to undergo further utilization and quality analyses

In Phase I, medical / behavioral health and pharmaceutical claims (176,553,255 claims) were obtained for a three-year period between 1998 - 2001. To allow resource utilization to be assessed one year following TennCare's pharmacy carve-out of services

* Costs were defined as the total amount of dollars charged.

for behavioral health and Medicare (dually eligible) patients, all claims from July 1, 2000 to June 30, 2001 were included in the analysis. Costs were defined as the total amount of dollars charged for inpatient, physician, pharmacy, home health, professional and miscellaneous services. Given this operational definition of cost, it is expected that costs and resource utilization will be over-estimated. To facilitate the analysis, a 20% random sample of the TennCare population who utilized services during the one-year period was included in Phase I.

## 5.0 RESULTS OF PHASE I

The results of the analysis performed on the medical / behavioral health and pharmacy costs* for the entire TennCare population for the study period estimate total costs* to be approximately $6.3 billion. Of that total, $4.7 billion (or approximately 75%) were attributable to medical and behavioral health costs*. The remaining 25% (or $1.5 billion) were attributable to pharmacy costs*. Several interesting observations regarding the data are described below:

- Mental Disorders, Endocrine / Metabolic Disorders, and Infections demonstrate a higher percentage of total cost* attributable to pharmacy costs* as compared to medical and behavioral health costs*
- The disease category with the highest total cost* for the TennCare population is Mental Disorders
- Six major disease categories (Mental Disorders, Circulatory System, Respiratory, Digestive, Musculoskeletal and Endocrine / Metabolic) account for approximately 50% of total costs* and 77% of pharmacy costs*
- Pharmacy costs* for three disease categories (Mental Disorders, Endocrine / Metabolic and Circulatory) contribute 66% of the total pharmacy costs* and 48% of total prescriptions dispensed
- Diseases of the respiratory system (COPD, Asthma and Pneumonia) demonstrated the highest number of medical / behavioral health encounters. This disease category had a total of 2.1 million encounters or approximately 10.9% of total encounters for the entire TennCare population
- Diseases of the Circulatory System (Hypertension, Coronary Artery Disease and Congestive Heart Failure) with approximately 6.7 million prescriptions or 18.9% of the total number of prescriptions for the entire TennCare population is the leading disease category for pharmacy utilization.

* Costs were defined as the total amount of dollars charged.

## 6.0 DISEASE STATES: TEN PRIORITY CONDITIONS

The results of the Phase I analysis identified the following disease states for further evaluation. It is important to note that several other diseases not mentioned here ranked high in utilization and cost*. These disease categories were not included on the priority list because there is a lack of evidence-based guidelines and primary literature supporting opportunities for quality improvement.

**PRIORITY DISEASE STATES**

| TEN PRIORITY DISEASES | TOTAL MEDICAL / BEHAVIORAL HEALTH AND PHARMACY COSTS* | TOTAL MEDICAL / BEHAVIORAL HEALTH COSTS* | TOTAL PHARMACY COSTS* | MEDICAL / BEHAVIORAL HEALTH ENCOUNTERS** | # PRESCRIPTIONS |
|---|---|---|---|---|---|
| MENTAL DISORDERS | $660,277,844 | $321,065,076 | $339,212,768 | 1,999,785 | 4,061,870 |
| ➢ SCHIZOPHRENIA | | | | | |
| ➢ DEPRESSION | | | | | |
| DISEASES OF CIRCULATORY SYSTEM | $635,625,564 | $423,472,446 | $212,153,118 | 978,605 | 6,704,760 |
| ➢ CORONARY ARTERY DISEASE | | | | | |
| ➢ CONGESTIVE HEART FAILURE | | | | | |
| ➢ HYPERTENSION | | | | | |
| DISEASES OF RESPIRATORY SYSTEM | $517,278,054 | $400,189,625 | $117,088,429 | 2,106,650 | 3,190,730 |
| ➢ PNEUMONIA | | | | | |
| ➢ COPD | | | | | |
| ➢ ASTHMA | | | | | |
| DISEASES OF MUSCULOSKELETAL SYSTEM | $461,257,771 | $316,670,728 | $144,587,043 | 1,261,055 | 4,429,205 |
| ENDOCRINE & METABOLIC DISORDERS | $362,692,003 | $107,602,364 | $255,089,639 | 866,510 | 6,219,075 |
| ➢ DIABETES MELLITUS | | | | | |
| TOTAL | $2.64 Billion | $1.57 Billion | $1.07 Billion | 7,212,605 | 24,605,640 |

*Costs were defined as the total amount of dollars charged.
**Medical encounters represent a claim submitted for professional health care services.
Figures are based on claims filed between July 1, 2000 to June 30, 2001.
Figures reflect analysis conducted on a 20% sample of utilizing TennCare members, which were then extrapolated to the entire population.

* Costs were defined as the total amount of dollars charged.